In the Claims:

Please amend the claims as follows:

1. (currently amended) A method for measuring in a previously obtained dynamic sequence of medical images of a moving body part, the method comprising:

defining at least one measurement point in the moving body part in one of said images;

defining a reference point in one of said images to a point being fixed relative to an image geometry, said reference point being different from said at least one measurement point;

automatically, using image processing software, tracking the at least one measurement point in all of said images of the sequence;

automatically, using image processing software, indicating the reference point in all of said images of the sequence;

automatically, using image processing software, determining a length and a direction of at least one vector extending from the reference point to one of the at least one measurement points for each pair of reference point and one measurement point in all of said images of the sequence, and

automatically, using image processing software, determining at least one of a rate of change of said length and said direction of said at least one vector between selected images in said sequence of images.

2. (currently amended) The method according to claim 1, further comprising:

automatically, using image processing software, determining at least one first distance

between the reference point and one of the at least one measurement points for each pair of one reference point and one measurement point using the length of the corresponding vector.

3. (currently amended) The method according to claim 1, further comprising:

automatically, using image processing software, determining a direction of movement of the at least one measurement point by using the direction of the corresponding vector.

4. (currently amended) The method according to claim 2, further comprising:

automatically, using image processing software, determining a direction of movement of the at least one measurement point by using the direction of the corresponding vector.

5. (currently amended) The method according to claim 1, further comprising:

automatically, using image processing software, determining a speed of the at least one measurement point by using said rate of change of the length of the corresponding vector.

6. (currently amended) The method according to claim 4, further comprising:

automatically, using image processing software, determining a speed of the at least one measurement point by using said rate of change of the length of the corresponding vector.

7. (currently amended) The method according to claim 1, further comprising:

automatically, using image processing software, determining at least one of an acceleration and a retardation of the at least one measurement point by using said rate of change of the length of the corresponding vector.

8. (currently amended) The method according to claim 6, further comprising:

automatically, using image processing software, determining at least one of an acceleration and a retardation of the at least one measurement point by using said rate of change of the length of the corresponding vector.

9. (currently amended) The method according to claim 1, further comprising:

automatically, using image processing software, comparing at least one of said rate of change of said length and said direction of said at least one vector between selected images in said sequence of images.

10. (currently amended) The method according to claim 2, further comprising:

automatically, using image processing software, comparing said at least one first distance between selected images in said sequence of images.

11. (currently amended) The method according to claim 5, further comprising:

automatically, using image processing software, comparing said speed between selected images in said sequence of images.

12. (currently amended) The method according to claim 7, further comprising:

automatically, using image processing software, comparing the at least one of acceleration and retardation between selected images in said sequence of images.

13. (currently amended) The method according to claim 3, further comprising:

automatically, using image processing software, comparing said direction of movement between selected images in said sequence of images.

14. (currently amended) The method according to claim 1, wherein ~~the step of~~ defining at least one measurement point in the moving body part in one of said images comprises defining at least two measurement points.

15. (currently amended) The method according to claim 14, further comprising:

automatically, using image processing software, determining a second distance between two of the at least two measurement points for each pair of two measurement points using said lengths of the corresponding vectors.

16. (currently amended) The method according to claim 15, further comprising:

automatically, using image processing software, comparing said second distance between selected images in said sequence of images.

17. (currently amended) The method according to claim 2, wherein ~~the step of~~ defining at least one measurement point in the moving body part in one of said images comprises defining at least two measurement points.

18. (currently amended) The method according to claim 17, further comprising:

automatically, using image processing software, determining a second distance between

two of the at least two measurement points for each pair of two measurement points using the first lengths of the corresponding vectors.

19. (original) The method according to claim 18, further comprising:

determining at least one dynamic angle using at least one of said first distance and said second distance.

20. (original) The method according to claim 18, further comprising:

determining an area using at least one of said first distance and said second distance.

21. (original) The method according to claim 19, further comprising:

determining an area using at least one of said first distance and said second distance.

22. (currently amended) The method according to claim 1, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ creating in each of said images a one-dimensional search field for the tracking of each of the at least one measurement points.

23. (currently amended) The method according to claim 8, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ creating in each of said images a one-dimensional search field for the tracking of each of the at least one measurement points.

24. (currently amended) The method according to claim 1, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ creating in each of said images a two-dimensional search field for the tracking of each of the at least one measurement points.

25. (currently amended) The method according to claim 8, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ creating in each of said images a two-dimensional search field for the tracking of each of the at least one measurement points.

26. (currently amended) The method according to claim 1, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ creating in each of said images a time resolved two-dimensional search field for the tracking of each of the at least one measurement points.

27. (currently amended) The method according to claim 8, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ creating in each of said images a time resolved two-dimensional search field for the tracking of each of the at least one measurement points.

28. (currently amended) The method according to claim 26, wherein ~~the step of~~ creating in each of said images a time resolved two-dimensional search field for the tracking of the at least one measurement point further comprises creating the search field using information from

at least one of previous and following images in said sequence of images.

29. (currently amended) The method according to claim 26, wherein ~~the step of~~ creating in each of said images a time resolved two-dimensional search field for the tracking of the at least one measurement point further comprises creating the search field using expected values based on information from the previous image in said sequence of images.

30. (currently amended) The method according to claim 14, wherein ~~the step of~~ automatically tracking the at least two measurement points is preceded by ~~a step of~~ creating in each of said images any combinations of one-dimensional search fields, two-dimensional search fields and time resolved two-dimensional search fields for the tracking of the at least two measurement points.

31. (currently amended) The method according to claim 1, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ image processing increasing the contrast between a reproduced object and a background.

32. (currently amended) The method according to claim 1, wherein ~~the step of~~ automatically tracking the at least one measurement point comprises using image processing software comprising at least one algorithm tracking the at least one measurement point.

33. (currently amended) A method for generating a previously obtained dynamic sequence of medical images of a moving body part and measuring in said previously obtained

dynamic sequence, the method comprising:

scanning a portion of a body of a patient including the moving body part for generating time resolved projection data;

generating said images from said projection data;

defining at least one measurement point in the moving body part in one of said images;

defining a reference point in one of said images to a point being fixed relative to an image geometry, said reference point being different from said at least one measurement point;

automatically, using image processing software, tracking the at least one measurement point in all of said images of the sequence;

automatically, using image processing software, indicating the reference point in all of said images of the sequence;

automatically, using image processing software, determining a length and a direction of at least one vector extending from the reference point to one of the at least one measurement points for each pair of reference point and one measurement point in all of said images of the sequence, and

automatically, using image processing software, determining at least one of a rate of change of said length and said direction of said at least one vector between selected images in said sequence of images.

34. (currently amended) The method according to claim 33, further comprising:

automatically, using image processing software, determining at least one first distance between the reference point and one of the at least one measurement points for each pair of one reference point and one measurement point using the length of the corresponding vector.

35. (currently amended) The method according to claim 33, further comprising:

automatically, using image processing software, determining a direction of movement of the at least one measurement point by using the direction of the corresponding vector.

36. (currently amended) The method according to claim 34, further comprising:

automatically, using image processing software, determining a direction of movement of the at least one measurement point by using the direction of the corresponding vector.

37. (currently amended) The method according to claim 33, further comprising:

automatically, using image processing software, determining a speed of the at least one measurement point by using said rate of change of the length of the corresponding vector.

38. (currently amended) The method according to claim 36, further comprising:

automatically, using image processing software, determining a speed of the at least one measurement point by using said rate of change of the length of the corresponding vector.

39. (currently amended) The method according to claim 33, further comprising:

automatically, using image processing software, determining at least one of an acceleration and a retardation of the at least one measurement point by using said rate of change of the length of the corresponding vector.

40. (currently amended) The method according to claim 38, further comprising:

automatically, using image processing software, determining at least one of an acceleration and a retardation of the at least one measurement point by using said rate of change of the length of the corresponding vector.

41. (currently amended) The method according to claim 33, further comprising:

automatically, using image processing software, comparing at least one of said rate of change of said length and said direction of said at least one vector between selected images in said sequence of images.

42. (currently amended) The method according to claim 34, further comprising:

automatically, using image processing software, comparing said at least one first distance between selected images in said sequence of images.

43. (currently amended) The method according to claim 37, further comprising:

automatically, using image processing software, comparing said speed between selected images in said sequence of images.

44. (currently amended) The method according to claim 39, further comprising:

automatically, using image processing software, comparing said at least one of acceleration and retardation between selected images in said sequence of images.

45. (currently amended) The method according to claim 35, further comprising:

automatically, using image processing software, comparing said direction of movement

between selected images in said sequence of images.

46. (currently amended) The method according to claim 33, wherein ~~the step of~~ defining at least one measurement point in the moving body part in one of said images comprises defining at least two measurement points.

47. (currently amended) The method according to claim 46, further comprising:

automatically, using image processing software, determining a second distance between two of the at least two measurement points for each pair of two measurement points using said lengths of the corresponding vectors.

48. (currently amended) The method according to claim 47, further comprising:

automatically, using image processing software, comparing said second distance between selected images in said sequence of images.

49. (currently amended) The method according to claim 34, wherein ~~the step of~~ defining at least one measurement point in the moving body part in one of said images comprises defining at least two measurement points.

50. (currently amended) The method according to claim 49, further comprising:

automatically, using image processing software, determining a second distance between two of the at least two measurement points for each pair of two measurement points using the first lengths of the corresponding vectors.

51. (original) The method according to claim 50, further comprising:

determining at least one dynamic angle using at least one of said first distance and said second distance.

52. (original) The method according to claim 50, further comprising:

determining an area using at least one of said first distance and said second distance.

53. (original) The method according to claim 51, further comprising:

determining an area using at least one of said first distance and said second distance.

54. (currently amended) The method according to claim 33, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ creating in each of said images a one-dimensional search field for the tracking of each of the at least one measurement points.

55. (currently amended) The method according to claim 40, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ creating in each of said images a one-dimensional search field for the tracking of each of the at least one measurement points.

56. (currently amended) The method according to claim 33, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ creating in

each of said images a two-dimensional search field for the tracking of each of the at least one measurement points.

57. (currently amended) The method according to claim 40, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ creating in each of said images a two-dimensional search field for the tracking of each of the at least one measurement points.

58. (currently amended) The method according to claim 33, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ creating in each of said images a time resolved two-dimensional search field for the tracking of each of the at least one measurement points.

59. (currently amended) The method according to claim 40, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ creating in each of said images a time resolved two-dimensional search field for the tracking of each of the at least one measurement points.

60. (currently amended) The method according to claim 58, wherein ~~the step of~~ creating in each of said images a time resolved two-dimensional search field for the tracking of the at least one measurement point further comprises creating the search field using information from at least one of previous and following images in said sequence of images.

61. (currently amended) The method according to claim 58, wherein ~~the step of~~ creating in each of said images a time resolved two-dimensional search field for the tracking of the at least one measurement point further comprises creating the search field using expected values based on information from the previous image in said sequence of images.

62. (currently amended) The method according to claim 46, wherein ~~the step of~~ automatically tracking the at least two measurement points is preceded by ~~a step of~~ creating in each of said images any combinations of one-dimensional search fields, two-dimensional search fields and time resolved two-dimensional search fields for the tracking of the at least two measurement points.

63. (currently amended) The method according to claim 33, wherein ~~the step of~~ automatically tracking the at least one measurement point is preceded by ~~a step of~~ image processing increasing the contrast between a reproduced object and a background.

64. (currently amended) The method according to claim 33, wherein ~~the step of~~ automatically tracking the at least one measurement point comprises using image processing software comprising at least one algorithm tracking the at least one measurement point.

65. (currently amended) A system for measuring in a previously obtained dynamic sequence of medical images of a moving body part, said system comprising means for:

defining at least one measurement point in the moving body part in one of said images;

defining a reference point in one of said images to a point being fixed relative to an

image geometry, said reference point being different from said at least one measurement point;

automatically, using image processing software, tracking the at least one measurement point in all of said images of the sequence;

automatically, using image processing software, indicating the reference point in all of said images of the sequence;

automatically, using image processing software, determining a length and a direction of at least one vector extending from the reference point to one of the at least one measurement points for each pair of reference point and one measurement point in all of said images of the sequence, and

automatically, using image processing software, determining at least one of a rate of change of said length and said direction of said vector between selected images in said sequence of images.

66. (currently amended) A system for generating a previously obtained dynamic sequence of medical images of a moving body part and for measuring in said previously obtained dynamic sequence, said system comprising means for:

scanning a portion of a body of a patient including the moving body part for generating time resolved projection data;

generating said images from said projection data;

defining at least one measurement point in the moving body part in one of said images;

defining a reference point in one of said images to a point being fixed relative to an image geometry, said reference point being different from said at least one measurement point;

automatically, using image processing software, tracking the at least one measurement

point in all of said images of the sequence;

automatically, using image processing software, indicating the reference point in all of said images of the sequence;

automatically, using image processing software, determining a length and a direction of at least one vector extending from the reference point to one of the at least one measurement points for each pair of reference point and one measurement point in all of said images of the sequence and,

automatically, using image processing software, determining at least one of a rate of change of said length and said direction of said at least one vector between selected images in said sequence of images.

67. (original) The system according to claim 66, wherein the scanning is performed by a X-ray device.